

### ABSTRACT OF THE DISCLOSURE

A detector receiver circuit for use as a wake-up detector for detecting an amplitude modulated carrier signal includes an antenna for receiving the modulated carrier signal; and a transistor, such as an FET, which is connected to the antenna and configured to operate as a detector of modulation of the carrier frequency. The circuit further comprises a resonator circuit which is also connected to the transistor and configured such that the transistor can simultaneously oscillate at substantially the modulation frequency; and an oscillator quenching circuit for periodically quenching oscillation of the transistor. The characteristics of the build-up of oscillation are sensed to indicate the presence of a modulated carrier signal. How quickly the magnitude of oscillation of the transistor builds up is dependent on whether the antenna is receiving a carrier signal which is modulated at the frequency of self-oscillation of the transistor, which is utilized to detect for the presence of a valid wake-up signal.